

**REMARKS**

Claims 16-32 remain in this application with claim 16 in independent form. Claims 1-15 have been cancelled and claims 16-32 have been newly added.

Applicant submits herewith a petition for a three-month extension of time to extend the date of response to the outstanding Office Action to April 7, 2005. Applicant also submits herewith a copy of the article titled "E-Commercing Oil Analysis" as requested by the Examiner, which was previously cited on the information disclosure statement submitted on January 14, 2002.

Also submitted herewith are copies of the Power of Attorney and Correspondence of Address Indication Form and the Statement under 37 C.F.R. §3.73(b).

Claim 9 was previously objected to for various informalities and claims 10-15 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Claims 9-15 have been cancelled and these objections and rejections are now considered moot.

Claims 1 and 12-15 stand rejected under 35 U.S.C. §102(a) as being anticipated by Margrey et al. (United States Patent No. 6,192,320). Claims 2-9 and 10-11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Margrey et al. in view of Boyle et al. (United States Patent No. 5,964,318) or Applicant Admitted Prior Art (AAPA). Claims 1-15 have been cancelled.

The subject invention claims a method of managing analytical data for lubricant samples obtained from a piece of equipment utilized by an end-user customer. The method comprises the steps of assigning a unique identifier for an end-user customer, assigning a unique identifier for a piece of equipment, and associating the customer identifier with the equipment identifier in a centralized database. Next, the centralized database is connected to the Internet to allow access thereto. Lubricant samples are

collected from the piece of equipment and the samples are tested by at least two independent analytical sources to produce analytical data relating to the lubricant sample. The analytical data is uploaded from the two independent analytical sources in a format different from one another into the centralized database across the Internet and the analytical data is converted from the formats of the two independent analytical sources into a common format. After the analytical data has been converted, it is compared to determine a status of the piece of equipment.

The subject invention solves a problem that routinely occurs in the analysis of lubricant samples for various end-user customers. As discussed in the specification, as originally filed, lubricant samples are typically tested by at least two independent analytical sources. In practice, this results because the end-user customer may have multiple locations spread around various countries or the analytical source may not be able to process all the lubricant samples. Alternatively, the end-user customers have to have different analytical sources analyze the lubricant samples in order to show that the results are non-biased.

As further discussed, there are disadvantages to having to change or alternate analytical sources to perform such analysis. It is a time consuming and costly proposition to change analytical sources. First, historical data for particular pieces of equipment or types of lubricants may be lost as a result of changing sources. Second, additional time and training must be spent to internalize any new reports or report formats that are provided by the new analytical source or to train new personnel regarding new procedures. Further, each analytical source may perform different tests on the lubricant samples or report the results from the tests in different formats. This is especially the case when the end-user customer has operations in different countries. The results may

be in a foreign language, have different units, or be performed to different standards, such as ASTM standards versus ISO standards.

Therefore, the subject invention has overcome these disadvantages by allowing multiple analytical sources to be used and to have a centralized database, or repository, that receives the analytical data. Once the analytical data is received, the data is converted from the format of the generating analytical source into a common format of the centralized database. After the data is converted into the common format, the analytical data can be compared and necessary actions may be performed on the equipment as a result of the comparison.

Since the centralized database is able to receive the analytical data from multiple analytical sources that are independent, the end-user customer no longer has to spend valuable time and resources in switching analytical sources. Further, the end-user customer is not losing the history of the lubricant samples if it is necessary to switch analytical sources. If a change in analytical source occurs, any analytical data provided by the new analytical source will be converted into the common format and will be able to be compared to the past analytical history. This is particularly important to determine the health of the piece of equipment. If the analytical data from the new source could not be compared, then changes or deviations in the data that may indicate a problem with the equipment might go unnoticed.

Referring to the references cited by the Examiner, Margrey et al. discloses a system for analyzing samples at remote locations and for accessing the results at a central laboratory (*see col. 4, lines 43-46*). Margrey et al. further discloses software interfaces that interact with equipment located at hospitals for running different procedures on a

**Applicant: O'Rourke**  
**Serial No.: 10/047,084**  
**Group Art Unit: 3629**

single piece of equipment. Margrey et al. does not teach, suggest, or disclose a method of managing analytical data for lubricant samples as claimed.


Boyle et al. discloses a system for maintaining the quality and level of lubricant in an engine lubricant reservoir. The Applicant Admitted Prior Art (AAPA), referenced by the Examiner and as discussed in the section titled "Background of the Invention" of the specification as originally filed, discloses methods of collecting and analyzing lubricant samples. Neither Boyle et al. or the AAPA teach, suggest, or disclose a method of managing analytical data for lubricant samples as claimed.

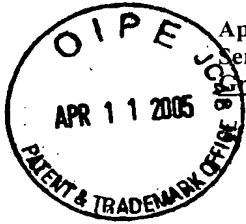
Since none of the cited references teach, suggest, or disclose the novel method as claimed in independent claim 16 of the subject application, claim 16 is believed to be allowable. Claims 17-32, which depend directly or indirectly from claim 16, are also believed to be allowable over the cited references.

Accordingly, it is respectfully submitted that the Application, as amended, is now presented in condition for allowance, which allowance is respectfully solicited. Applicant believes that no fees are due, however, if any become required, the Commissioner is hereby authorized to charge any additional fees or credit any overpayments to Deposit Account 08-2789.

Respectfully submitted  
**HOWARD & HOWARD ATTORNEYS, P.C.**

April 7, 2005  
Date

  
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Group Art Unit: 3629

CERTIFICATE OF MAILING

I hereby certify that this Amendment for United States Patent Application Serial Number 10/047,084 filed January 14, 2002 is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on April 7, 2005.

Melissa Dadisman

Melissa S. Dadisman

KKH/

# Practicing Oil Analysis

The Magazine for the Analysis and Management of Lubricants

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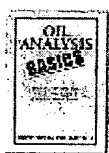
## E-Commercing Oil Analysis

James K. O'Rourke, The TAK Group

### Expect the Web to Play an Increasingly Important Role in the Future of Oil Analysis

By James K. O'Rourke, The TAK Group

Those who have dedicated their careers to the used oil analysis business may be feeling a bit distant from the e-commerce boom that is sweeping the world. It is time for the oil analysis industry to embrace the latest technologies and join the new economy that our brethren in other industries are leveraging to redefine every business model from issuing mortgages to selling toys.



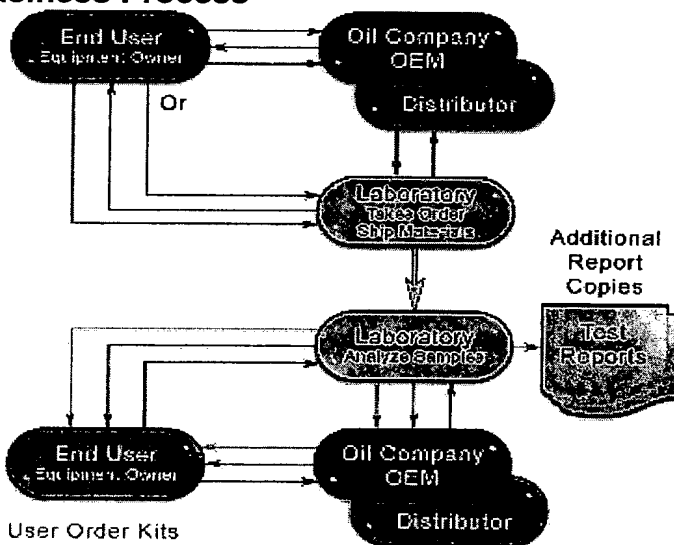
Oil Analysis Basics

### The Oil Analysis Business Process

Like most industries, the business process for oil analysis was established before the advent of the technologies that are currently revolutionizing the manner in which business is done. Broadly speaking, the conventional oil analysis business process contains the following characteristics.

1. The end-user first orders kit materials and sampling supplies from the vendor.

2. There is often a multi-level distribution channel to get these materials (and later the service) to the end-user that involves the contract laboratory and the customer's Oil Company or the original equipment manufacturer (OEM). Sometimes the local distributor is also involved. The multi-level channel partners want their brand identity attached to the entire



process. The contract laboratory is expected to appear invisible to the end-user.

3. The end-user returns the kit materials to the vendor laboratory filled with oil from the equipment of interest.

4. The vendor laboratory analyzes the oil and delivers a report that summarizes the condition of the end-user's oil and equipment.

5. All through the process, the end-user wants and needs to know about the process on a real time basis - what about my oil, what about my equipment, how do I (as end-user) do my part in the process, tell me more about what your service tells me, etc.

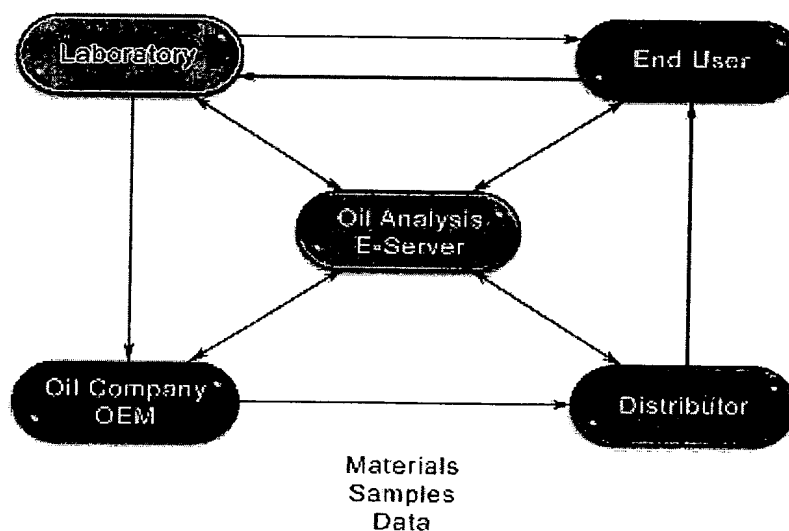
6. Likewise, the other players in this multi-level distribution channel also want to know all this information so they can better support their customers and so they may use the field performance information provided by oil analysis to continuously improve their products.

7. Billing and accounting takes place and payment occurs to the vendor laboratory, either from the end-user, from the Oil Company or OEM, or from some combination of both.

End-users demand and deserve responsive supply of kits and accessories, and accurate information provided in a timely fashion. Likewise, all parties are interested in accurate accounting so as not to waste time and energy in this area. And, because oil analysis technologies are ever changing and evolving, achieving success is like performing a balancing act on a pendulum. If ever there was a process that lends itself to the benefits provided by e-commerce tools, it is oil analysis. In fact, the industry will thrive with the benefit of e-commerce tools. The important deliverables will be more accurate, more available and will cost less.

Through e-commerce, providers and marketers of oil analysis services have an opportunity to differentiate themselves from the crowd and improve the quality of service being provided to their customers. Likewise, end-users have an

opportunity to obtain the information necessary to make informed maintenance decisions more easily and in a more flexible format. Below is a discussion about the role of e-commerce relative to the primary oil analysis activities.



#### Customer Data Flow

Order kits, query order, check sample status, get sampling techniques, research equipment, get test reports, manipulate data, pay invoice, check account status, query history, etc.

#### Kit Ordering

Nothing in the oil analysis process could be more e-commerce sensible than kit ordering. Wasted time and money can be avoided by ordering kits and sampling materials on-line from the supplier. Using a password, the end-user simply logs on to handle the task online at his or her convenience. The order can be as simple as a replication of a previous order, or it can be customized to meet the needs of the present situation.

### **Marketing**

Laboratories, distributors, oil companies, and OEM's could benefit from running electronic oil analysis transactions through their branded web site as the oil analysis portal - while still keeping the customers outside of their respective firewalls. In addition to building brand identity, the customer is also provided with an opportunity to see the company's other offerings, making business more convenient.

### **Return of kits**

The physical nature of the process requires that the fluid-filled kits be submitted to the laboratory the old fashioned way, or be tested with on-site testing equipment. The Internet makes it much easier to track the status of samples that have been sent to the laboratory to ensure that they don't get hung up or to identify poor shipping performance. Likewise, the occasionally misplaced shipment is always easier to find when these records are immediately available. End-users, Lubricant Companies and OEM representatives alike can track a sample's progress from "cradle to grave" and intervene if necessary.

### **Reporting of data**

The Internet is perfectly suited to the task of sending and receiving test data and analysis. The information, including equipment attributes and sample trends, can be made immediately available by posting it on a password protected Internet account. The information can be collected from the Internet, through a Bulletin Board System (BBS) download, or by e-mail, making it immediately available for robust analytical and statistical analysis.

### **Ancillary information**

The Internet enables the user to review the equipment's sampling interval guidelines, get updates on proper sampling techniques, review warranty requirements, request product bulletins, download maintenance information relative to the equipment, etc. Using the web medium, an abundance of information may be accessed with the click of a mouse.

### **Hierarchical reporting**

Once generated, the data must be properly sorted to meet each user's specific needs. Maintenance supervisors and fleet managers need to know about the condition of their lubricants and equipment. The manager of the facility or region may want a high level view of the condition of all the equipment under her control. The parent company must have easy access to all of its locations' data across the country and the world. Distributors and dealers expect on-demand data over the Internet to better enable them to support all of their customers. Major oil companies and Original Equipment Manufacturers must have information relative to their program and simultaneously provide service that builds brand image as an innovator.

### **Need for speed**

And all of this has to happen now. For point of reference, a study by Keynote Systems ([www.keynote.com](http://www.keynote.com) - USA Today 12/14/99) identified ten major sites averaging 19.61 seconds in loading and availability 90.3% of the time (and the bar is being constantly raised). Not only do end-users need the information quickly, but remember, if you're a marketer, your brand is on display. It has to be a pleasing experience, which in Internet terms means easy and FAST.



### **Data Warehouse**

As an industry, we collectively are the keepers of tremendous amounts of valuable information about both fluids and equipment. Expect your oil analysis environment to put this asset to work for you. As an end-user, how does your equipment stack up against the norm? If you are in the supply chain, are you using the data to inform your customers, and leverage your suppliers? And what about the parsing of all that data by engine type, or oil product, or operating environment, etc.? The new economy is here and its time to stop making excuses for not developing the data asset. Data integrity is the responsibility of everyone in the loop. The world of the complete oil analysis e-server is upon us.

### **Accounting**

Accounting is a no-brainer! E-commerce all the way. The kits have been ordered. Payment, checking account status, navigating the special business development funds used in the industry for oil analysis is absolutely best managed in the Internet accounting world. (Note to marketers and distributors: transactions for the lubricants and equipment parts certainly need to flow in this medium as well.)

### **New technologies**

The points made above primarily address the laboratory-private label model that has, over the years, become the defacto standard for oil analysis. However, these models are evolving. You will find the only constant in the New Economy is that the solution and data will always need to be provided more quickly and less expensively. The Internet will only exaggerate such changes, so be ready for an ever-faster pace.

In summary, the future focus of used oil analysis ...

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... is not on the testing (laboratory or equipment based) process itself. The old economy was based on models whereby the means to achieve what a customer wanted defined the industry. Those means now represent the service floor and must be offered at a near zero-defect level. In the New Economy, those means are being handled in bytes and nanoseconds, and business is about streamlining the process and delivering the end result immediately. This article is intended to renew your enthusiasm for the intriguing oil analysis industry, and to kick-start you into being a "change agent" in the market.

James K. O'Rourke, President of The TAK Group, specializes in strategically moving companies into e-commerce. Mr. O'Rourke was past President and is currently a consultant to CTC Analytical Services, the largest commercial oil analysis provider in the world. He can be reached at [jamie.orourke@thetakgroup.com](mailto:jamie.orourke@thetakgroup.com).

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